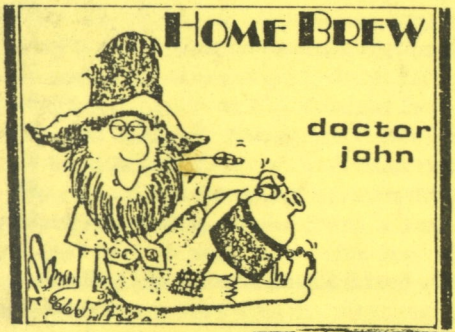
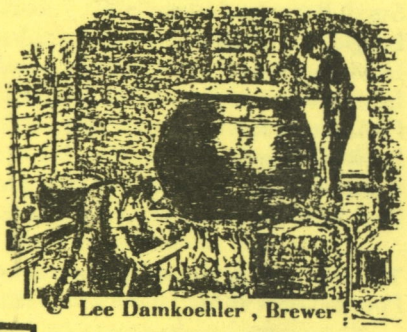
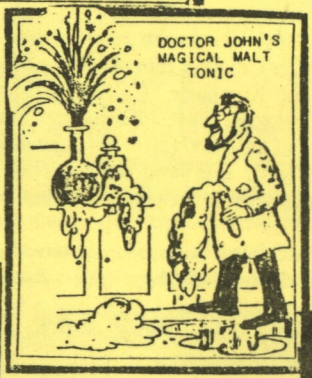
THE Amateur Brewer

FOR THE SERIOUS HOME BREWER

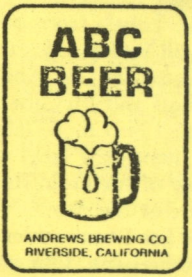


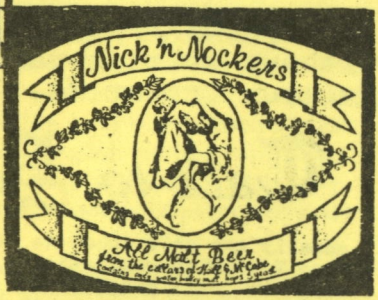


Lee Damkoehler , Brewer



BLACK
BART'S
Tooth & Nail
STOUT





AMATEUR BREWER

The Amateur Brewer
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Published by Fred Eckhardt
J.I. Takita

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The *Amateur Brewer* is published irregularly by Fred Eckhardt, Assoc., P.O. Box 546, Portland, OR 97207

Front Cover: Labels from our readers. Clockwise from upper left, Dr. John Charles Boldon of Mill Valley, Ca., and San Francisco's *San Andreas Malts*. Lee Damkoehler of Oconto, Wisconsin. Al Andrews of Riverside, California *Anza Brewers and Connoisseurs*. Hall and McCabe of Hooksett, New Hampshire. Bob Schade of Saginaw, Michigan, and two more labels from Doctor John who grew up in the Appelachian Mountains, hence the label (upper left), and who tells us that Black Bart, poet-stage coach robber of the Gold Rush days was, in reality, Charles Bolton, a San Francisco society figure of the day.
Back Cover: Lee Damkoehler's second label taken from a wood cut in the famous book 100-years of Brewing. Our reproduction of all these labels leaves much to be desired.

Amateur Brewer No. 7, Summer 1980

Talk to Your BEER

I usually use this space to "explain" why it is we are so #*@*# late. I finally realized the AB is a lot of work--always more than I think it could possibly be. That is because I always think I know what I am doing, until I start to put it down on paper. That's when I always find that I no longer agree with what it was I thought I knew when I first formulated these writings (about 7-years ago when I finished an, as yet unpublished, manuscript). I always think I can go to that, pick out any subject, copy it off, and send it to the printers. It has never been that easy. I always have to re-do the entire subject. I always know more now than I did then, and I never agree with myself about what I wrote then. It's just as well I never found a publisher.

Continued on page 59.

ENGLISH DRAUGHT BEER

by
T. Foster
c 1980

Mention English beer to most Americans, and they'll probably reply 'Oh, the flat and warm stuff?' This prevalent attitude arises from a basic ignorance about the subject. Which isn't really surprising, because the best English beer is rarely sold outside of England, so you can't drink it unless you go there.

Why is that? Simply because the English, unlike the beer-drinkers of most other countries of the world, drink far more draught, than they do bottled or canned beer. Much of this draught beer is still served in its traditional form, and is not filtered, pasteurized, nor artificially carbonated, which doesn't make it suitable for export, as it does not travel well, unless properly handled.

You can, of course, get American draught beer; it's usually filtered, but not pasteurized, and is served from a keg by gas pressure. Sometimes English 'draught' beer is sold here; this has always been pasteurized, and is also dispensed by gas from a keg. The word 'keg' is used fairly loosely here, but in England it has a very specific meaning, and refers to a vessel from which the beer can be dispensed only by the application of an excess of carbon dioxide pressure.

In the case of true, traditional English draught beer pressure dispense is not used. Instead, each glassful is drawn from the cask. 'Drawn' is the key word, because it's from this that the term 'draught' is derived. But the term 'cask' is also important. Nowadays, this traditional vessel may be made of aluminum or stainless steel, instead of wood, but in contrast of a keg it still has two holes in it, one to draw off the beer, and the second to let air in to replace the beer drawn off.

Ah! You say to yourself, that's why English beer is flat, and we're back where we came in. Here I must state, quite categorically, that English draught beer is not flat, even though it might seem so in comparison to American beer. If it were truly flat, and contained no gas at all, it certainly would not taste particularly good. In fact, a properly served pint of traditional English draught beer has about one pint of carbon dioxide dissolved in it, or one volume of gas per unit volume of beer, at normal temperatures. English bottled, and keg, draught beers contain about 1½-2½ volumes of dissolved gas, whilst lager beers contain 2½-3 volumes of carbon dioxide, with American beers being at the top of this range.

But surely this doesn't make the beer taste any different? Doesn't the gas just give the beer a head, and generally make it look interesting? You must have tasted club soda, or soda water, as we call it in England. This is only carbonated water, but it most definitely does not taste the same as the water from which it is made, does it? The British consumer organisation *CAMRA*, The *Campaign For Real Ale*, is firmly convinced that if a beer contains more than 1-volume of dissolved carbon dioxide its true flavour will be concealed, and

therefore spoilt. Many English beer-drinkers concur with this point of view, which is why CAMRA has been so successful in persuading brewers to continue producing traditional, cask-conditioned beer. And as far as the private brewer is concerned, why go to great lengths to ensure that your beer has a full and distinctive flavour, only to hide this flavour by making the beer too gassy?

Another important point about English traditional draught beer is how it gets its content of dissolved carbon dioxide. In modern commercial practice, after fermentation the beer is chilled, filtered, and pasteurized. Since this ensures that no live yeast remains in the beer, it must be artificially carbonated in order to get the gas content up to the required level. The brewers' reasons for doing this is to help him produce a consistent-tasting beer, which usually means boredom for the drinker! That's especially the case in the U.S., where the commercial brewers have realised that the way to brew a beer with consistent taste is to make it with no taste at all!

English 'real ale,' as it is sometimes called, is not filtered or pasteurized and still contains living yeast when it is casked. This yeast brings about a secondary fermentation of the beer after it has been delivered to the pub. This is what gives it its gas content, because the cask is bunged down during the secondary fermentation, and the bung is only removed when the beer is served.

With the top-fermenting yeasts used in English brewing this conditioning cannot take place below about 50° F. Which is why English draught beers are customarily served at 50-55° F, this being the normal temperature of a good cellar in England, even during what we laughably call our summer. Now this is cool, and definitely not warm, being only a few degrees above the temperatures at which the Germans drink their fine lager beers. Most Americans think that British beer is too warm, but much of the rest of the world consider that Americans serve their beer far too cold!

Because English real ale is a naturally-conditioned beer, its flavour is never exactly consistent. The same batch of beer from a brewery may taste different in different pubs, according to the storage conditions used in the individual pubs, and can vary from the revolting to the superb. This makes it the antithesis of modern American commercial beers, because it is a drink of individuality, character and distinction. It may be an acquired taste, but to anyone of discrimination it is a taste most definitely worth acquiring!

Terry Foster has been brewing for over 20-years. He is married to an American lady, lives in Milford, Connecticut, and likes his beer "real ale style." He thinks Americans drink their beer too cold, and that American beer is too bland.

Dr. Foster is a chemist, specializing in applications of flocculants (called 'finings' in brewing) in the mining industry. His job takes him all over the world to sample beers of all nations.

Terry is the author of numerous articles in English publications such as *Amateur Winemaker*, the *Home Beer and Winemaking*. He is a student of the brewing industry and Brewing history, and the author of *Dr. Foster's Beer Book* (see Book reviews). We are delighted to add Dr. Foster to our list of contributors.

59 WAYS TO DE-NATURALIZE YOUR BEER

by Fred Eckhardt

The Bureau of Alcohol, Tobacco and Firearms is proposing labeling regulations which, if adopted, would become mandatory January 1, 1983. Brewers would have to list all essential components of the beer, including water, all additives remaining in the finished product, and all colors, flavors and preservatives in the product, but would not require the ingredients to be listed by weight as is required for most food products. No mention of alcohol content required. The labels could use such terms as "corn and/or corn syrup."

Typical labels: *Beer:* brewed from: malt, rice or barley, or corn or corn syrup, hops, water, yeast, enzymes, calcium disodium EDTA, heptylparaben, and sodium ascorbate as a preservative.

Another: *Beer:* brewed from: malt, hop extract, water, yeast, enzymes, propylene glycol alginate, natural and artificial flavors, caramel color, and potassium metabisulfite as a preservative.

Anyone for a dollop of calcium disodium ethylenediamintetraacetate, with just a dash of isoamyl butyrate, laced with methyl anthranilate and flavored with a malt beverage of some sort?

What about your beer, what goodies do YOU add? Ascorbic acid, citric acid, lactic acid, tartaric acid, potassium meta-bisulfite, calcium sulfate, magnesium sulfate, sodium chloride, gum acacia, quillaja bark extract, diastase, papain, carageenan, sucrose, dextrose, animal and vegetable gelatin, caramel coloring, urea, mono-ammonium phosphate, and thiamine, to name a few that you might actually measure out and add by the half or full teaspoonful.

If you brew a standard home brew using *Blue Ribbon* malt extract, your label might read: *Beer:* brewed from: malt extract, corn and/or corn syrup, hop extract, yeast, water, sodium citrate, dextrose, animal gelatin, caramel coloring, quillaja bark extract and sodium ascorbate as a preservative.

Well — what about it?? Lately, I have concluded that the less stuff you add, the better the beer. What about the water you say? Recently I made a beer using our Portland soft water, with only good imported malt extract, fresh hops, and brewery yeast. The results were quite satisfactory, and in no way inferior to my usual brew. I think that if you are brewing from decent quality malt extracts the addition of water will reconsittute a beer wort suitable for boiling with hops to produce beer. The water composition is most important during the mashing cycle. When you brew from malt extracts the mashing has already been done for you. It is true that calcium and magnesium sulfate aid in the extraction of hop resisn, and their incorporation into your beer. What I am really saying is that you should think your way through the whole matter and see what is absolutely necessary. If you are brewing beer by mashing grain malts, you should note that the sulfates added to the water do their job by lowering

the pH. In Pilsen, Czechoslovakia the famous *Pilsner Urquel* is brewed by standing the mash for about 6 hours at 95° F (35° C) to achieve the lower pH through bacterial means. This is our dilemma as well as that of the brewing industry.

Long ago I ceased to use most additives in my own beer, although I can, and do, give instructions as to when, and how much of what, to add to the common ingredients which we home brewers use on occasion. These include so-called heading liquid, anti-oxidants, and nutrients called-for in most recipes. I have even modified the water treatment formulas in the most recent edition of my book by reducing salt (sodium chloride). I think that could be further reduced, even eliminated, with many water supplies and more, expecially in regards to malt extract beers. This is not to say that I'd try to brew a Burton-type strong ale with our Portland soft water, but then again maybe I should give it a try. In any case you have to decide for yourself whether to go natural or not, because you drink your beer.

If you would like a xerox of our xerox of the list of FDA additives permited in beer from the *Congressional* Record March 12, 1973 p7406, by NY representative Benjamin Rosenthal, please send me TWO (2) fifteen cent stamps (30c) AND a self addressed envelope. (That's 15c for xerox and 15c for postage to cover my costs.) If you write me a letter that's fine, but if you expect or need an answer, that will delay prompt mailing of your xerox of my xerox.

THE **MILLER'S** POT CALLS THE **BUDWEISER** KETTLE BLACK

The recent controversy between *Millers* and *Budweiser* about who adds what to which beer is very interesting to us amateurs. For the first time we can get a picture of how much of which ingredient is being added by the major brewers to their beer.

It really is a clear case of the pot calling the kettle black, because they all use some of those 59-FDA approved ingredients, and indeed so do we amateurs (see 59-Ways article). The real clue here is how much of which, and this is the first time that such specifics have been placed in the public domain. *Millers* names ingredients and amounts in their 29 pages of allegations and *Budweiser* tells us what *Millers* is doing to their beer. The net result is that we have a much better idea of what the entire industry is doing to our beer. For now let us examine *Miller's* allegations about *Anheuser-Busch*, made in February of last year. (For recent statements by both breweries see end of this article.)

Tannic acid (hydrolyzable gallotannins) is a common item. If you make wine, you will probably add 50-60 ppm to some of your wines. *Anheuser-Busch* allegedly adds up to 80 ppm, and they buy around 800,000 lbs. of it annually. The ingredient is used as an aid to clarification, something which would not be necessary if *Bud* were to use a few more hops, which is what tannifys *YOUR* beer. I suspect that most of the tannin is removed in the fining process, but a recent study hints that a significant increase in consumption might constitute a dietary hazard. Nobody knows, but it is clearly not a natural ingredient. *Budweiser* claims it is removed in the fining process. More serious, and yet more laughable is *Miller's* complaint about adding chemically

treated lumber. They are referring to the use of beechwood "chips" to aid in fining beer. This is a traditional way to fine the beer after natural krausening (which *Bud* does in a modified way). What we see as bad is that Budweiser calls this procees "Beechwood Aging." Beechwood aging implies that the beer is aged in giant beechwood casks in the manner of wine being aged in oak barrels. Nothing could be further from the truth: *Budweiser* is aged in glass-lined steel tanks in the same way all other American beers are aged. There is no wood involved in the aging process. (Even 19th century brewers lined their wooden vessels with pitch to keep wood from coming in contact with the beer.) The statement is a patent lie, if one examines the thing, but then when we examine the complaint of *Miller, they* are calling this traditional krausening process un-natural, whereas the crime of *Budweiser*, if any, lies in calling the process "Beechwood Aging," which it most surely is not. At any rate, according to *Miller's* complaint, *"Anheuser-Busch* interjects highly processed, chemically treated beechwood slats into its beers to further demonstrate the untenability of its 'natural' claims." The slats are cleaned by boing boiled for up to 25 hours, part of the time with the additional of large amounts of sodium bicarbonate, which *Millers* calls chemical treatment. A-B deposits up to several feet of these chemically treated wooden slats into each storage tank. The slats are repeatedly reused, and the process is un-natural, according to *Miller.*

Among the charges made by *Anheuser-Busch* against *Phillip Morris-Miller* are allegations that *PMM* uses varius enzymes which are not heat sensitive, and therefore are not destroyed by pasteurization, and remain active in the beer when it is consumed. The most interesting allegation against *Miller* is that they use hop extracts, which are "processed with boron hydride and solvents are used to chemically modify the hop to prevent sun struck or skunky odors in *Miller* beer — which is not protected from light by the draditional brown bottle — used by most other brewers." *A-B* goes on to deride *PMM* for producing U.S. *Lowenbrau* which could not be sold in Germany under the German purity law (Rheinheitsgebot).

Our complements to these two brewing monsters for generously sharing with the public these disturbing facts about the brewing industry.

Following are the full texts of the August 14-15, 1979 statements by the two breweries.

Millers says:

Three expert nutritionists who advised the Federal Trade Commission in connection with the proposed rule on "natural" advertising for food have concluded that the "natural" campaign used by Anheuser-Busch, Inc., in the advertising and promotion of its principal beer brands is "false and deceptive."

The conclusions of the three experts on food and nutrition were part of a supplemental memorandum filed here today with the Federal Trade Commission by the Miller Brewing Co., The FTC had obtained the opinions of the same three nutritionists last year when it drew up its proposed rule to end the abuse of the term "natural" for food advertising. According to the expert testimony, the Anheuser-Busch "natural" campaign for its four beers — Budweiser, Natural Light, Busch and Michelob — is inaccurate, deceives consumers and is the kind of abuse of the term that led to the necessity of such a rule.

The nutritionists are Dr. George M. Briggs, professor of nutrition and assistant dean of the College of Natural Resources at the University of California, Berkeley; Dr. Angela C. Little, food scientist in the Agricultural Experiment station and professor in food science at the Uni-

versity of California, Berkeley; and Dr. Willard B. Robinson, chairman of the Department of Food Science and Technology and head of the Food Science Institute at Cornell University.

"It is inaccurate and plain deceptive to allow Anheuser-Busch to assert that its beer is natural," said Dr. Briggs, co-author of the leading college textbook on nutritional science. Dr. Briggs said that "there is no reason why the same considerations (which underlie the "natural" advertising rule for food) should not apply to beer."

Dr. Little described Anheuser-Busch as "one of the worst offenders" in the abuse of the term "natural." "In fact," said Dr. Little, "the beer sold to the consumer by Anheuser-Busch is far removed from anything identified as natural by scientists and consumers." While stressing "that natural is a good word," Dr. Little concluded that Anheuser-Busch's advertisements "corrupt the word's proper usage and deceive consumers who rely upon the truthfulness of advertisers' claims to make knowledgable purchases."

Dr. Robinson also found that Anheuser-Busch's "natural" advertising "seriously misleads the consumer. Anheuser-Busch's campaign is precisely the type of consumer exploitation and advertising abuse which caused the FTC to put an end to the misleading uses of the word natural in connection with other food advertising." The proposed rule the consultants advised the FTC about provides that "advertising shall not represent that a food is natural or a natural food if . . . such food has undergone more than minimal processing after harvest (or) contains any chemical preservative or any other artificial or synthetic ingredient."

Essentially, the three consultants said that Anheuser-Busch's advertising would violate that rule if it applied to beer. The experts concluded that Anheuser-Busch's highly processed, chemically modified and treated beers do not come within this accepted definition of "natural," said the memorandum.

In defending itself, Anheuser-Busch has offered its own definition of "natural" as an alternative to the objective standard in the FTC's proposed "natural" advertising rule. AB claims that "natural" should mean "produced only with natural ingredients and using traditional processes." But, said the memorandum, AB's beers could not meet even its own definition. "AB's beers are not made with all natural ingredients. Nor has AB adhered to traditional processes. On the contrary, technological change, innovation and expediency characterize AB's brewing process," the memorandum said.

Miller cited as AB's non-natural and non-traditional processes:

* Using the additive tannic acid produced by a chemical solvent extracton process in its beers as a chillproofing agent (to prevent haze). Tannic acid has been recognized in scientific literature as serving three distrinct functions: chillproofing agent, anti-oxidant and antimicrobial preservative.

* Using chemically treated beechwood slats during the fermentation of Budweiser;

* Mechanically injecting carbon dioxide into its beers (a technique AB itself has called "artificial");

* Employing the modern technique of "high gravity" brewing for Budweiser, Busch and Natural Light; that is, brewing beer "too heavy" for commercial consumption, and then diluting it with carbon dioxide-injected water;

* Shortening the brewing cycle for Budweiser by nearly 25 per cent in recent years.

and According to BUDWEISER:

In a statement issued Wednesday, Dennis P. Long, vice-president and general manager of the Beer Division of Anheuser-Busch, Inc., answered charges made Tuesday by Philip Morris subsidiary Miller Brewing Company before the Federal Trade Commission:

The latest charges by Philip Morris and Miller and by the three nutritionists who were employed by Philip Morris and Miller are a rehash of the propaganda campaign which Philip Morris and Miller have conducted against Anheuser-Busch over the past eight months.

The charges are prompted by the fact that Philip Morris/Miller cannot use the term "Natural" to describe their chemically produced beers (see page 2 for details) and, therefore, must resort to the tactic of trying to discredit Anheuser-Busch products.

Obviously, Philip Morris and Miller are growing increasingly paranoid about our continuing record pace sales gains and about their inability to market their products as natural. Moreover, it is widely known in the industry that many markets are overstocked with stale Miller beer with inventories at extremely high levels which have resulted in worker layoffs at their breweries.

Anheuser-Busch filed with the Federal Trade Commission June 20 extensive evidence supporting its claim to the term "natural" and refuting the original Philip Morris/Miller charges in the matter; those date back to February 1. Tuesday's attack does not change our position on the "natural" question. Our beers are natural products. Specifically, as it relates to the Philip Morris/Miller charges:

(1) Tannin — Is a natural plant substance used to chillproof A-B beers. The tannin used by A-B to chillproof its beers is not an artificial ingredient; moreover, the taninn used by A-B to chillproof its beers is settled out of the beer during the process.

(2) Beechwood — The beechwood chips used by A-B in its lengthy ageing process are not an ingredient in A-B beers and are not chemically treated.

(3) Carbonation — A-B beers are carbonated by means of a traditional, natural technique which utilizes carbon dioxide produced during the fermentation process.

(4) Brewing Process — A-B uses a traditional, natural Old World brewing process involving natural ingredients, two fermentation steps (including Kraeusening), lengthy natural ageing and the use of beechwood chips.

PM/Miller's brewing procedures are vastly different from A-B's and are not natural. Specifically:

(1) PM/Miller uses a shorter brewing cycle and less costly ingredients than A-B.

(2) PM/Miller beers cost less to produce — and their breweries cost less to build than A-B breweries — because of the shorter Miller brewing process.

(3) PM/Miller uses:

(a) Fungal enzymes — (from aspergillus niger) to produce their Lite beer. This fungal enzyme is not heat sensitive and remains active in Lite beer when consumed by the public.

(b) PM/Miller uses the proteolytic enzyme papain to chillproof its beers which remains active in the beer when consumed by the public.

(c) PM/Miller uses no natural hops in High Life and Lite. Hop extracts processed with boron hydride and solvents are used to chemically modify the hop to prevent sun struck or skunky odors in Miller beer — which is not protected from light by the traditional brown bottle — used by most other brewers.

(d) PM/Miller injects liquid sugar in Lite beer.

(e) PM/Miller uses a chemically processed seaweed extract (propylene glycol alginate) to build foam on their beer.

(f) PM/Miller uses potassium meta bisulfite as an antioxidant.

ANHEUSER-BUSCH DOES NOT USE ANY OF THE ABOVE INGREDIENTS OR TECHNIQUES.

Additionally, PM/Miller is the same company that sold U.S. produced Lowenbrau as an imported German beer — when in fact it could not be sold in Germany under the German purity law — because of the ingredients used by Miller.

We again challenge PM/Miller to full ingredient labeling — so the consumer can make an independent choice.

NOTE: Anheuser-Busch's position on the natural question is contained in a document filed with the FTC on June 20, 1979. Copies of that document and other pertinent materials are available upon request to Vice President & General Manager, Beer Division, Anheuser-Busch, Inc., St. Louis, Missouri.

THE TRUTH ABOUT DIET BEER

by Fred Eckhardt

These days when U.S. Brewers make better commercials than beer, the *Ortlieb Brewing* Company, of Philadelphia, Pa., offers us their Do-It-Yourself Light Beer kit:

"**CONTENTS:** One case *Ortliebs Beer. Ortlieb's Sparkling Water. One stirrer.* **DIRECTIONS:** Take glass, pour 2 parts Ortlieb's Beer, 1 part *Ortlieb's Sparkling Water.* Stir gently. Drink immediately. According to Joe Ortlieb, famous Philadelphia brew master, that's about all it takes to brew your own light beer. That's why he doesn't."

You can do the same with your beer, substituting even cheaper soda water which was found preferable to most imported and domestic mineral or sparkling water in a recent New York tasting.

Another time Joe Ortlieb told people how to make light beer with an even simpler recipe. Add ice cubes to his beer, he said.

This, apparently, is exactly what *Anheuser-Busch* does to *Michelob light* (According to *Nutrition Action* September 1979) they add 20% water. Now that may not be as bad as it sounds. According to Earl Stewart, of the prestigious *Schwartz* laboratory, writing in the *American Brewer* (now defunct) in April 1954 "97.2% of the calories from the fermented wort carbohydrates are retained in the beer . . . the calorie value of the beer should be closely related to the calorie value of the original wort . . ."

If you want only less calories you simply reduce the original gravity, or alternately add water to the end product before bottling and carbonating it.

The accompanying table should make this relationship clear. If you want reduced carbohydrates and a relatively normal alcohol level you must produce a wort which has a greater degree of fermentability than is normal for beer. This means there must be a few, if any, unfermentable carbohydrates remaining in the beer — that is, you must reduce the dextrins. Dextrins contribute greatly to the good taste of beer, so we can expect such a beer to have less taste. Since dextrins are the natural product of the enzyme action, which produces fermentable sugars in beer wort during the mashing process, you must use an enzyme OTHER THAN THAT NATURAL TO THE BEERMAKING PROCESS.

Most commonly, commercial breweries use *amyloglucosidase*, a fungal enzyme, produced from the mold *Aspergillus niger*, which will convert all of the dextrins to fermentable sugars. These low gravity worts, with their lower alcohol production, need very careful supervision to avoid infection. The ferment must be cold, and in closed fermentors, with a quick settling yeast. The enzyme *amloglucosidase* is not destroyed by pasteurization, and is very unsuitable for amateur use, although it is available to homebrew suppliers through *Premier Malt Products.*

Some so-called light beers, such as *Oly Gold*, are produced by a combination of both the above methods. They have very low alcohol and low carbohydrates — they are truly water, and not worthy of your efforts.

TABLE ONE

	Busch Natural Light *	Millers Lite	Schlitz Light	Olympia Gold #	5/'78 U.S. Light Average	12/'77 U.S. Regular Average	Basic Home Brew **	A-B McCallum-brau **
Original Grav. (5-places)	1.030.6	1.031.4	1.030.6	1.022.1	1.028.2	1.043.5	1.041.0	1.029.5
Specific Grav. (5-places)	1.001.4	0.998.6	0.998.9	0.999.9	1.001.2	1.009.2	1.002.0	1.000.0
Alcohol % (wt)	3.0*	3.4	3.3	2.3	2.9	3.5	4.1	3.1
Alcohol % (vol)	3.8*	4.3	4.1	2.9	3.6	4.4	5.1	3.9
Real Extract %	1.74	1.17	1.20	1.01	1.35	3.94	1.96	0.85
pH	4.8	4.0	4.1	4.6	4.3	4.15	--	--
Total Acidity % Tartaric	0.13	0.09	0.13	0.11	0.09	0.11	--	--
Hop Bitterness (Bittering)	11.0	18.8	13.7	8.7	12.1	13.4	15-25	22
Calories/12-Oz (/355-ml)	97.8*	99.8	96.5	70.3	96.7	147.5	147.4	96
Carbohydrate gm /12-Oz--355-ml	4.9*	3.0	2.7	1.7	4.8	14.0	7.1	3.0
Color	1.65	3.10	2.89	4.44	2.8	2.58	4.5	3.0

TABLE ONE: Analysis of Various beers. Named beers from a major brewery's lab analysis. Average beers analysed by Brewer's Digest. Home made beers based on our calculations.

* 1977: currently Natural has 110-cals, 3.3 & 4.1% alcohols, 6.4-gm carbohydrates

\# Pabst Light beer is very similar to Oly Gold--70-cals, much water.

** Original Gravity corrected for bottling sugar: +0.003.

When I started writing about beer a few years ago, I found the classic definition of light beer, (as opposed to heavy beer, not dark beer). The line was drawn at 13°B (1.053). Beer with lower original gravity was called "light," higher than that "heavy." Nowadays the word has taken on an entire new meaning for us beer-people. Light means diet. Fifty percent less calories, one-third less, or 20 percent less than "our regular beer." They never tell you how much their regular beer rates in calories, and more and more they are saying less and less about their diet beer. That's mostly because they don't want you to know that those calories they remove are mostly alcohol. How low can beer get before it is "near beer?" Table one will reveal much.

I wish I could tell you that you can make a beer with "One-calorie per serving" in the manner of the soft drink industry, but there is no escaping the fact that alcohol produces about 7.1 calories per gram. A 12-oz bottle (355 ml) of average U.S. commercial beer (see table one) with 3.5% alcohol (by weight) contains 12.4 gm pure alcohol: 88 calories from that source alone. Moreover, there are also 3.9 calories from each gram of carbohydrates. The same beer has 3.94% carbohydrates (Real Extract). This is 14-gms in the 12 oz. bottle (3.94 × 3.9), which is 54.5 calories. These, plus about 4 calories from protein, total just over 147 calories. Let's face it, it is very difficult for an alcoholic beverage to be "diet."

Most home made beers are lower in calories than commercial beers, and if we made them with the same alcohol content they'd be much lower, about 119-calories, but we don't, so they are more like 4.1% (alcohol by weight — see table one), resulting in about the same number of calories as commercial beers. The home brew in question is the normal 2½-3 lb. malt extract for 5-6 U.S. gallons (19-24 litre) batch, which along with dextrose 3- 4-lb. (1.5-2.5-kg) forms the fermentable extract of those beers.

SPECIFIC GRAVITY OF THE BEER

The specific gravity of the beer is read (at room temperature) in the usual manner, after first decarbonating the beer. This is done by pouring the sample back and forth between two glasses several times, and then filtering the liquid through several layers of cheesecloth, to remove the foam, be sure to correct the reading for temperature, if that is not 20°C (68°F), or nearly so.

ALCOHOL CONTENT OF THE BEER

This is occasionally found on the label of commercial beers. If you know the percent of alcohol by volume, multiply × 0.8 to find percent by weight. Most American commercial beers are 3.2% to 3.6% alcohol by weight and Canadian commercial beers are very similar. The labels of Canadian beers often indicate the percent of alcohol by Imperial proof spirit. This figure is multiplied × 0.46 to find alcohol by weight.

Alcohol content of your beer is calculated from the difference between the original gravity (as measured), and the gravity of the beer, (measured as described above). This is also called the gravity drop. You should remember to include the increase in gravity added at bottling time (usually about 1.003). The alcohol percent by weight = total gravity drop × 0.105. Thus if your original gravity was 1.038, and the gravity of the beer 1.002, we find 38 − 02 + 3 (we disregard the 1000 factor), a total drop of 39. Multiply this × 0.105 (39 × 0.105) = 4.1% by weight.

REAL EXTRACT

The specific gravity of the beer, as described above, is also called the *apparent extract* because, due to the presence of alcohol (sg 0.791), it is not an accurate indication of the quantity of non-fermentable solids. These non-fermentable solids make up the extract, and that is called *real extract*, to differentiate it from the *apparent extract*. Find the *real extract* as follows: Mark your hydrometer jar with a piece of tape at the usual level required to float and read your hydrometer. Add beer to this level, take a reading with your hydrometer as described above. Next, pour the contents into a small saucepan, bring to a boil and boil until the volume is reduced by about half. Pour all of the remainder back into your hydrometer jar, (after first cooling it some), add a little water to the saucepan to rinse that, and add this water as well, taking care not to overflow your taped mark. Then carefully add water (preferably distilled) to bring the dealcolized beer back to its original level in the ydrometer jar. Find the Balling gravity of this dealcolized sample. If you use the standard winemaker's triple-scale hydrometer, take the reading from the degrees Balling scale. If you have a so-called Beer Tester, use that reading. If your hydrometer reads *only* specific gravity, multiply the s.g. by 0.144, or use a table to find the Balling degree. In any case to find the percent Real Extract percent (by weight — the figure we need) multiply the s.g. of the beer times the Real Extract Balling (above). For example if the specific gravity of your beer was 1.004 and the Balling of the dealcolized sample was 3, the percent of Real Extract (by weight) would be just over 3%, or (1.002 × 3.0) = 3.006 gm / 100-ml.

CARBOHYDRATE GRAMS AND CALORIES

If you multiply the above (gm / 100-ml) times the number of milliliters in the volume of beer (1-US fl. oz. = 29.57-ml; 1-Imp fl. oz. = 28.39 ml) and divide that figure by 100, you will find the total carbohydrate grams in that sample of beer. For example, 1 12-oz. (355-ml) bottle of the above beer would contain (3.006×355) / 100-gm carbohydrate, or 10.7-grams total.

We know that each gram of carbohydrate will yield about 3.9-calories in your tummy, so you will have (10.7×3.9=) 41.7 calories from the carbohydrates. Twelve-ounces commercial and amateur all-malt beer has about 4-calories (1-gm) from protein. "Standard" home brew has about half that amount (2). These, plus the alcohol calories, will be the total calories, since beer has no fat content.

ALCOHOL CALORIES

Multiply the alcohol percent (by weight), as calculated earlier, by the volume of the beer sample, expressed in millilitres. The result is then divided by 100 to find the total grams of alcohol in the sample. There are 7.1-calories in each gram of alcohol. Using our sample again (table one), this is 4.1% by weight. This, times the specific gravity = gm / 100-ml. In our example: 4.1 × 1.002 = 4.11. This, times the volume (4.11 × 3.55 ml − 12 oz bottle) = 1458 / 100 = 14.5-gm alcohol in the sample. We then multiply calories per gram of alcohol (7.1) by the number of grams alcohol to find the alcohol calories. Thus 14.6 × 7.1 = 103.7-calories from alcohol. The total calories in our beer would be 41.7 + 2.0 + 103.7 = 147.4-cals.

A LIGHT BEER FOR YOU
A LIGHT BEER FOR YOU
A *LIGHT* BEER FOR YOU

I believe this beer is usable (in moderation) by diabetics, but they should check with their doctor as to quantities allowable, etc.

I usually do not "name" my beers, but I am naming this beer *McCallum-brau* after my good friend Jack McCallum of Wine-Art Oregon, who died in 1970 from the effects of diabetes. He would have liked this beer, and I think he could have used it safely. Studies have shown that beer is the safest of all alcoholic beverages when used properly and in moderation. This is a naturally thin-bodied beer, and it is wise to use only the highest quality ingredients.

We have an *Amateur Brewer* test recipe available on request (stamped self-addressed envelope) for making this light beer from all grain malts. *Amateur Brewer Test* recipes have been formulated by us, but not fully tested, and so we can't publish them, but you can try them. I have a hard time convincing myself that I should make another diet beer, when I can put an ice-cube in my regular beer and get the same effect.

McCALLUM-BRAU LIGHT BEER

Two quantities are listed to allow for whatever volume your equipment and quantity of malt extract you use.

INGREDIENTS

5½-US gals: Yield 5-gals (21-litre, 4.6-UK gal)		16.5 US gals: Yield 15-gals 15-gals (62 litre) 13.8-UK gal
16-oz (454 gm)	Malt Extract syrup	1 × 3-lb
4-oz (115-gm)	Crystal Malt (crushed)	12-oz (340-gm)
2-lb, 7-oz (1.13-kg)	Dextrose (Corn sugar or glucose)	7-lb, 5-oz (3.3-kg)
6-oz (170-gm)	bottling dextrose	18-oz (510-gm)
1.5-oz (45-gm)	boiling hops	4.5-oz (130-gm)
½-oz (15-gm)	finishing hops	1¼-oz (35-gm)
250 ppm	Water Treatment*	250 ppm
Nutrients at racking		

*1-tspn potassium chloride, (salt substitute) (use triple for column 3)
1½ tspn gypsum, ¼-tspn epsom salts for soft water.

Water	Water	Water

Adjust to gravities listed below by using water or sugar, as necessary.
Original Gravity: 1.026 (6.5°B)
Racking: 1.010 (2.5°B) Add nutrients at racking.
Terminal: 1.000 or so
Alcohol 3.1% by weight, 3.9% by volume, 6.8% Imp Proof.
The finished product will have about 96-calories per 12-oz bottle, literally "one-third less than our regular beer!" with 3-grams carbohydrates, 0.5-gm portein and no fat at all.

PROCEDURE

Crush the crystal malt, place it in a cheesecloth or nylon bag, and steep for an hour, at 150°F (65.5°), in one gallon of water discard the grain bag and proceed with your usual brewing method. We recommend that you boil the wort for 1¼ hour, minimum, the last 30-minutes with the boiling hops. Place the finishing hops in your primary fermentor. Ferment using a refrigerator, in lager style, using methods we have discussed or those outlined in my book (p44). If that seems too complicated, use any method you are used to, but the key word is cool. Ferment as cool as possible. This beer is very susceptible to infections because of its low alcohol content. Allow about 2½ months lagering at 33°F (0.5°C) or half that at 50°F (10°C). Don't drink more than four bottles a day if you really want to lose weight, and you'll need to run / walk / swim 100 calories worth (4-miles, 4-miles, 1-mile) of aerobic exercise to rid yourself of each bottle of this beer.

If this beer's characteristic dry, tart, taste offends you, you might experiment with adding artificial sweetner at bottling time.

If you don't like this beer, you can improve on it by adding an ice cube to your regular beer, or better, drink only three bottles of that and have 25% fewer calories.

SMALL BREWERY NEWS

The queen of all small breweries, San Francisco's *Anchor* Brewery is happily brewing beer in new quarters a few blocks removed from the old brewery, with a new 3600 gallon brew kettle, lauter-tun, mash mixer and mash kettle. These new items make Fritz Maytag's *Anchor* Brewery a story-book brewery — the way it's spozed to be!

New Albion Brewing Co., of Sonoma, CA., reported a profit of $5000 for the last half of 1979, with owner Jack McAuliffe projecting an expansion to 1550 gallons a day for 1980. The mini brewery brews five times a week in 50 gallon batches and the beer is Real Ale, that is, it is finish-fermented in the bottle you buy. ($1.30, plus deposit).

Meanwhile further north in California at Chico our friend Ken Grossman and partner William Camusi are planning to produce their *Sierra Nevada* beer in June. Capacity of the new brewery will be around 310 gallons a day.

California's other two small breweries are *California Steam Brewing Co.*, (San Rafael) and *Debakkers*

Here in Oregon our own small brewery has just marketed its first batch. Charles Coury, his wife and son are completing the last details of their Cartwright Brewing Co. which can produce around 100 gallons a day. Their first beer is *Portland* beer, an ale.

BERGIES BETTER BEER

My good friend and frequent drinking companion, Jack Berglund is from Portland, but he spends much of his time at his cabin off Vancouver Island, British Columbia. Canadian wine is so dreadful, that he took to making his own wine while up there. He didn't have great success in that endeavor and switched to making beer, although he has no complaint about Canadian beer, except that it is almost as bad as U.S. beer.

When I first visited him in Canada (6-miles by boat or foot from Whaletown, B.C.) he offered me some of his beer, and it was prohibition style-homebrew.

I said, "Jack, you can do better than this." So back in Portland he took my brewing course, and changed his methods — some.

The beer he makes these days is more sophisticated and has a fine taste; although he doesn't care for all-malt beers, and sees no reason to use expensive dextrose (corn sugar). He uses sucrose (household cane sugar) to brew and carbonate his beer. It is very good, and I cannot fault him for using cane sugar, although I would never do so. Here's his recipe for *Bergie's Better Beer*, as he calls it:

INGREDIENTS

6-US gallons (5-UK gal; 23-litre) yield 5½-US gals.
1 × 3.5-lb tin *Munton-Fison* Light Hopped Malt Extract
1 × 10-gm packet *Superbrau Hallertauer* Hop Pellets
56-oz Sucrose (cane sugar) (7-US cups — 1.6 kg)*
8-oz bottling sucrose (225-gm)*
1 tspn *Knox* gelatin, Gypsum for water if needed; lager yeast, and yeast energizer.
*A purist might want to use dextrose: 62-oz (10⅓ cups — 1.8 kg) and just 1-cup for carbonation, but it might change the taste of this good beer.

O.G. 1.048 (11.8°B)
Racking 1.020 (5°B)
Terminal: 1.003-6 (0.7-1.5°B)

PROCEDURE

In a kettle add 2-gallons of water, bring to a boil, add the hopped malt extract, bring to a boil, add the hop pellets, boil 1-hour, add the sugar and boil 15-minutes.

Strain into your fermentor, add 4-US gallons water, cool to about 70°F (21°C) or less, and add the lager yeast (Jack uses *Red Star*). Ferment at 60°F (15.5°C), and skim when the head starts to fall.

At racking (1.020), add a half-tsp of yeast energizer, and finings. At bottling time, bottling (after racking) with 1-cup sucrose for 5½ gallons. Jack leaves his beer in secondary in the cold Canadian winter, for 3½-months, while he returns to Portland. His beer has a rich fine taste, despite his use of more sugar than most people. It is very good beer.

IN MEMORIUM

Two friends of home brewing passed on recently. Merlin Elhardt of the Maltose Falcons met with a tragic accident on his job as a telephone lineman. Merlin's article on yeast in our last issue of the Amateur Brewer was widely appreciated. Merlin was a fine homebrewer, and his presence surely will be missed.

Dave Line, author of the *Big Book* of *Brewing*, and *Making Beers Like Those You Buy*, and an as yet unpublished third book, as well as many many articles in the (English) *Amateur Winemaker* magazine, died shortly before he was to visit the Home Wine and Beer Trade Association convention in Minneapolis in April. Dave's contribution to homebrewers everywhere is almost unmeasurable and he will be sorely missed. Dave Line was the world's foremost authority on making beer at home. I went to the HWBTA convention almost entirely for the purpose of meeting him, and I know the conference was not at all the same in his absence. Farewell, Dave, I never met you, but I know I would have liked you.

f.e.

BOOK REVIEWS

Since our last issue, a number of beer books have been published.

Foster, Terence, *Dr. Foster's Book of Beer*, 1979, London, England: A. & C. Black, ltd. hardcover, 179pp available in the U.S. from the author, $10 postpaid, Dr. T. Foster, 96, Cornflower Dr., Milford, CT 06460.

This book is a real pleasure to read. Dr. Foster's knowledge of beer fills this book to the brim with wonderful and lively information. Half-way through the book you may want to rush off to England to sample some of their delightful beer, if so, take the book with you, otherwise you won't know which beers to buy. No matter, the good doctor has the prescription for you in the chapter on brewing at home.

The book is in English, and it is aimed at an English readership, but Dr. Foster has taken pity on us poor Americans by writing an article, in American, on English beer. His article is found elsewhere in this issue.

Jackson, Michael, Ed., *The World Guide to Beer*, 1977, New York: Prentice-Hall, Inc., Hardcover, Illus., 254pp, $25.00

A handsome coffee-table book absolutely loaded with fascinating information on beer from every country that has a brewery. Photographs of the beer, the breweries, the people who drink it, beer glasses, maps, locations, brewery and brewery histories, and much more. If I had thought I was somewhat knowledgeable on beer, this was quite an eye-opener. A must for anyone who thinks he knows beer. The book is worth twice the price.

FOUR NEW BEERMAKING BOOKS

Eckhardt, Fred, *A Treatise on Lager Beers, FIFTH EDITION*, 1979, Portland, OR: Hobby Winemaker, 53pp, Illus. $2.00

Only a few changes in this edition, we changed the master-table from 6- to 5-gallon batches, to reflect that fact in US brewing habits. Don't bother buying this if you have the Fourth Edition but it is substantially different from the third (and earlier editions).

Papazian, Charlie, *The New Revised and More Joy of Brewing*, 1980, Boulder, CO: Log Boom Brewing paperback, Illus., 86pp, $4.50.

This is a joyous book to read. Charlie writes with humor and wit, his methods are sound, and his approach to brewing is best summed up with his motto: "Relax. Don't Worry. Have a Homebrew." You can't go wrong with that kind of an approach, and we can forgive him if he wants to add honey and various herbs and roots to some of his beers. Relax. Don't worry. Have a homebrew. And remember, honey is a natural ingredient, and it is impossible to make mead without it. Never fear, most of the recipes, (and there are plenty of them), use standard ingredients, and Charlie DID win at the first International Homebrew competition in Minneapolis, Minnesota in April, so relax. Don't worry. Have a Homebrew. Charlie Papazian is the Editor of Zymurgy.

Moore, William, *Home Beermaking, The Complete Beginner's Guidebook*, 1980: Oakland, CA 94604, paperback, 43pp. Price unknown.

Mr. Moore's methods and sound recipes will be of value to anyone wishing to make good beer at home. This is a pleasing and informative book. Mr. Moore is easy to read, and he writes authoritatively.

Baker, Patrick, *The New Brewer's Handbook*, 1979, Westport, MA., Crosby and Baker Books, Illus., 37pp. Price unknown.

Mr. Baker writes well, his explanations are very nicely done and the recipes, although of limited scope, well thought out. I found the book pleasant, informative and quite useful to beginning homebrewers, but ... we have to

disagree on two procedures he advocates in the name of keeping things simple. I don't think single stage fermentation, and a ten-minute boil will produce the best beer for beginners. Plain malt extract and hop pellets must be boiled longer than 10-minutes to incorporate hop resins and expel unwanted and insoluble proteins. If you keep this in mind, the book should make a nice addition to your library.

Morgan, Scotty, *Brew Your Own, Grains into Beer, A Beginner's Mashing Manual*, 1979, San Leandro, CA., *Home Fermentor's Digest*, paperback, Illus., 38pp.

This book is aimed at grain brewers, and gives some very good information on brewing from grains. The information is especially valuable now that Dave Lines *Big Book* is in such short supply. If you have been interested in brewing from grains, this book will be a great help. The book is rather limited in scope, in that it covers only the English mashing method for use at home, and gives no information on step-infusion methods, and decoction methods which may be better for making Continental and American style beers. Nevertheless we highly recommend the book for beginning grain brewers. One feature, which I found quite valuable, was the short chapter on using soft-drink dispensing apparatus for getting homebrew on draft in YOUR home.

PERIODICAL REVIEW

Home Fermenter's Digest, bi-monthly by Home Fermenter Publications, 2761 Teagarden St., San Leandro, CA 94577, $6.00 per Year.

Editor Georgia Weathers of Wine Supply West has produced what we have all needed for several years now: A beer and WINEMAKING magazine. Large-style format, generously illustrated, nice attractive cover, and 24-large pages. This magazine should be very welcome, if only because it does not neglect beer, as have most winemaking publications. The current issue has almost 8 pages of good beer information including an article on brewing with grains. This one belongs in your library.

Zymurgy, Quarterly by the American Homebrewers Association, P.O. Box 287, Boulder, CO. 80306, $6.00 per year.

This magazine has improved considerably since our last (issue) review. Large style format, 19 pages illustrated with photos and drawings, and the current issue has a fine article on malting Barly by Bill Petrij.

Editor Charlie Papazian describes himself and staff (and the American Homebrewer's Assn.), "the entire staff of AHA depends on full-time jobs elsewhere." He is a nuclear Engineer-turned-school teacher. The AHA is a Colorado non-profit corporation. The magazine is much more informative than the earlier issues, and has a good section on the activities of Beer clubs, so if you have such information send it on to them (us, too).

f.e.

BREWERY NEWS

Milwaukee, WI — *Schlitz'* new premium beer *Erlanger* went national in March. Ho-Hum, and Gee Whiz.

Meanwhile *Pabst*, whose *Andeker* was going nowhere fast, has adopted our local (Portland, OR) *Blitz-Weinhard* brewery and its baby *Henry Weinhard's Private Reserve*. Told to develop the very best beer possible, the *Blitz* Brewing staff came up with a great Munich-style beer, but were then told to forget it because the new beer was too good, people could only drink a couple of bottles. Everyone knows that's no way to sell beer.

Portland, OR — It's too bad all you people live somewhere else, because our local (*Pabst*-owned) *Blitz* brewery makes the best damned commercials for T-V. Verne and Earl, a pair of lovable California scamps, are forever trying to bring their California (we Oregonians blame everything on California) *Schludwiller* (*Schl*itz, *Bud*weiser, *Miller*) beer into Oregon. At the border our good guy State Cop stops them to ask if their beer is brewed naturally. Verne turns to Earl and says "Is it?" Earl doesn't answer, only shakes his head slightly. "Well then," says the cop, "Why would you fellers be bringing that beer into Oregon?" The two are seen driving off their huge beer truck with Verne asking Earl how far to the Idaho border. In another gem the two are piloting an old *Schludwiller* DC-3 wearing WWII airplane helmets (the kind with ear flaps). They look out to see a biplane overtaking them. "Oh-oh," says Earl. Our good guy again, with a broad smile from under his WWII helmet, "Well now, where would you two fellers be going with all that beer?" The DC-3 is next seen heading north with Vern saying "Is there really an airport in Tumwater?" (Tumwater, home of *Olympia* Brewery near Olympia, Washington).

Meanwhile in California a real company was formed to market a product they were going to call *Schludwiller Beer*, to take advantage of the name exposure on the above TV series. *Blitz* went to court and forced those California people to give that up.

In defense of our local brewery, they claim to use no additives of any kind, and on every bottle they publish a "pull-date," 60 days after bottling, so you can always get the freshest of their very ordinary beer, and they didn't fight the Oregon bottle bill when it passed (well — they hardly fought it!).

Meanwhile across the river in Vancouver, Washington, our other brewery is producing a beer called *BEER* (generically labeled *Lucky Draft*). This beer sells for $2.39/12-pack, and is as good as any American beer is expected to be.

BREWEX 80 — Olympic Games of Beer

An International beer and lager competition has been held as part of Brewex 80, the International Brewing, Bottling and Allied Trades Exhibition at Birmingham, England. 104 beers have been entered in the competition March 17-21. Although 75 breweries and 29 countries were represented there were no beers from the United States.

The entry list: Australia 3, Barbados 6, Belgium 1, Botswana 2, Brazil 1, Canada 3, France 3, Gambia 1, Greece 3, Guatemala 1, India 3, Israel 3, Italy 2, Kenya 4, Malasia 3, Malta 1, Netherlands 1, New Zealand 5, Nigeria 7, Norway 1, Papua 4, Seychelles 1, Switzerland 2, Togo 1, United Kingdom 29, West Samoa 1, West Germany 5, West Indies 3, Yugoslavia 4.

Canned beers have been included for the first time although the high gravity (1.058 plus) lager class has been dropped.

J. Buswell, plant director of *Bass Brewing* Ltd., Birmingham, headed the judging panel of 36 judges, and we have not received the results of this competition at this time.

Brewex was first held in 1879 as a Brewers Exhibition, an annual event through the 40's, it became triennial 1954-60, and quadrennial since that time. The absence of American beers (there were 6 in 1976) gives us valuable information about the competitive state of our beer.

BEER CLUB NEWS

For some time now we have been receiving the newsletters of The Maltose Falcons, (Editor, John Fitzgerald), and the San Gabriel Worthogs, (Editor, Gerry Bos) both LA area clubs. We have also been the recipient of a fascinating newsletter, The Grain, from Anza Brewers and Connoisseurs of Riverside California (Editors Al Andrews --his label on our cover--and John Gabbert). This latter Group have beer tastings on commercial beers, and they feed their results into a computer, and they get computerized results! They have a computer workup on all of these tastings which they may share with you if you send a couple of bucks to cover costs, postage, and beer for them. (I haven't checked this with them, so I really don't know if they can do this but it's worth a try. Al Andrews, 5740 Via Sotelo, Riverside CA 92506.

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Continued from front cover---

That doesn't solve YOUR problem, i.e. What do YOU do with such an undependable character? Well--for one thing, you can ALWAYS get your money back. That's the only thing I do promptly--refunds usually go out the day the request arrives. Of course I don't have many such requests (none direct, but I have refunded money to two people who were complaining about my promptness--or lack of it). I have enough money in a special account, so there is no problem. My real problem is time. My photo business went down the tube, mostly because of this enterprise. That was OK with me, because I didn't care for the business aspects of photography anyway. Lately I have been telling people that there will only be four more issues of the AB (up to No. 10). I will still publish in some fashion, possibly by publishing the "news" in a Fred Eckhardt Newsletter (quarterly), and with an annual monograph. I will work something out, because I'm having too much fun to quit.

The second problem you folks have with me is that I am gawd-awful s-l-o-w in getting our your orders. Usually this is not true in the case of simple orders, but almost half of you send questions you want answered. These get separated, and held until I have time to answer. WHEN finally the pile get's so big I can no longer put off answering them, then the people with simple orders have to wait for their stuff, while I answer the longer letters. And of course everything gets behind when I actually get into producing an issue of the Amateur Brewer, and I end up under the 8-ball again. Worse, since I have a full time job, I get doubly behind in everything, and I get a little depressed when that happens.

Continued

What can I tell you? Take my refund offer--or be patient. I have a product--information--which is very valuable, and you need it. I don't think of myself as a writer on beer, but rather as a translator from scientific-ese, and English-ese into American-ese. Between us we will save American beer for posterity, because we (you and I) are the only people in the world who give a damn about the wonderful old beers our fathers were able to drink. Most of those beers will be gone forever unless we make them at home.

YOU AND YOUR NITROSOMINES

One of the delays of this issue was that I wrote a lengthy article on nitrosomines, and finally concluded that they are no longer a problem, It would seem that malt extracts do not have nitrosomines (not so powdered milk and new cars), or if they are present they are at such low levels as to be unmeasurable. If you make all-grain beers, the new malted barley is very low in nitrosomines, and probably will not effect your beer.

ONE-DAY SEMINAR IN ADVANCED HOME BREWING

Successful Brewing and Beyond--a one-day course to be offered this Fall by the University of California Extension, UC Davis. It is for serious home brewers who want to expand their skill and efficiency in brewing. The course stresses practical skills and equipment design which can be used at home. Speakers and topics include: Steve Ghiglieri, MS candidate in Fermentation Sciences, UCD, and head of the UCD Pilot Brewery, on An Overview of Raw Ingredients; Alan Tobey, Wine and the People, on Beer Design; Don Barkley, brewer, New Albion Brewery, on Yeast Culture, Selection and Maintenance and Microbiological Problems in Beer; Dr. Michael Lewis, Professor, University of California, Davis Food Science and Technology Department, on Mashing Theory; Guy Pawson, Past President, San Andreas Malts, and Larry Lapsley, home brewer of 15 - 20 gallon lots of home-mashed beer, on Equipping the Home Brewery, and Jack McAuliffe, President and Master Brewer of New Albion Brewery, on the Genesis of the New Albion Brewery. The course ends with a tasting of selected beers.

"The course is not a beginning brewing class: students must have a good understanding of basic alcoholic fermentation and beer production from malt extracts. It will be held Saturday Nov. 15, 1980; 8:30 am to 4:30 pm, the fee is $35. For further information call (916) 752-0880, or write University Ext., UCD, Davis CA 95616.

The course sounds great, and here's your chance to visit sunny California in the fall, and if I can make it I plan to attend this one too! The UCD Pilot brewery is worth a visit--I fell in love with it the first time I saw it. Mabe we can steal it and take it home! Beautiful stainless steel kettle, Mash-tun, Lauter tub, etc., and it hangs on a wall.

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If you have a satisfying recipe, and it does not violate too many of our pristine principals, and the product is *really* satisfying, not just to you, but to your friends, then share it with us. We'll do a short article such as the above, and remember to tell us a little about yourself, too. We can only use one such recipe per issue, however, so we'll have to be the judge. We need the information shown above and in our usual recipes. Don't worry about metrics either.

Amateur Brewer
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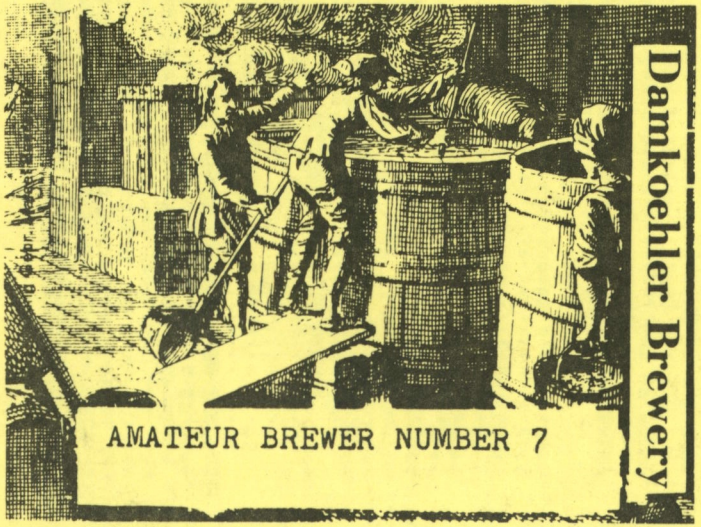

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